

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

REMARKS

Claims 1-10 are all the claims pending in the application. By this Amendment, Applicant amends claim 7 to some extent only for improved conformance with US practice. It is respectfully submitted that these conformity-related amendments have not narrowed the scope of the claims in any way, and do not constitute any impermissible new matter.

By this Amendment, Applicant also adds claims 11-15. Claims 11-15 are clearly supported throughout the specification *e.g.*, pages 4, 5, and 7 of the specification.

I. Preliminary Matters

Applicant thanks the Examiner for indicating acceptance of the drawings filed on November 4, 2003. Applicant also thanks the Examiner for acknowledging Applicant's claim to foreign priority and for indicating receipt of the certified copy of the priority document. Further, Applicant thanks the Examiner for returning the initialed form PTO/SB/08 submitted with the Information Disclosure Statement filed on February 12, 2004.

II. Summary of the Office Action

Claims 1-10 presently stand rejected under 35 U.S.C. § 103(a) and claim 7 presently stands rejected under 35 U.S.C. § 101.

III. Claim Rejections under 35 U.S.C. § 101

Claim 7 is rejected under 35 U.S.C. § 101 as being directed to allegedly non-statutory subject matter. Applicant respectfully requests the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

IV. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-4 and 7-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,412,375 to Wood¹ (hereinafter “Wood”) in view of U.S. Patent No. 6,169,898 to Hsu et al. (hereinafter “Hsu”). Applicant respectfully traverses these grounds for a rejection in view of the following comments.

Independent claim 1 recites:

receiving of a required quality of service parameter set from a core network by a radio network controller,
selecting a sub-set of air interfaces from a set of air interfaces, the sub-set containing air interfaces, which support the required quality of service parameter set,
providing the sub-set to a node of a radio access network having the set of air interfaces,
selecting an air interface from the sub-set by the node for providing the required quality of service to a user equipment.

That is, in an exemplary, non-limiting embodiment, a network controller receives the required quality of service parameters from a core network and selects available air interfaces that match these service parameters from all air interfaces. The selected air interfaces are a sub-set of all air interfaces. This sub-set of air interfaces is sent to a node of a radio access network (RAN) and the node selects an air interface from the sub-set for providing required quality of service to a user equipment. It will be appreciated that the foregoing remarks relate to the invention in a general sense, the remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand the distinguishing aspects of the claims mentioned above.

¹ Cited by Applicant in Information Disclosure Statement filed February 12, 2004.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

The Examiner alleges that claim 1 is directed to a telecommunications method and is obvious in view of the combined disclosure of Wood and Hsu. Specifically, the Examiner alleges that Wood discloses selecting a sub-set of air interfaces from a set of air interfaces and providing the selected sub-set to a node of RAN and having the node of RAN select an air interface from this sub-set (*see* page 3 of the Office Action). Applicant respectfully disagrees.

Wood is directed to matching interfaces available at a base station with the interfaces available at a subscriber device (col. 1, lines 45 to 61). Specifically, Wood discloses that the subscriber 41 transmits a list of air interface capabilities to a base station 44 (Fig. 1; col. 2, lines 15 to 25). The base station 44 then transmits the received list along with its own air interface capabilities to a controller 45. The controller 45 selects an air interface that is supported by both and sends the selection to the base, which in turn, may accept or decline the selection (Figs. 1 and 4; col. 2, lines 26 to 67).

Wood, however, does not disclose or suggest “selecting a sub-set of air interfaces from a set of air interfaces, the sub-set containing air interfaces, which support the required quality of service parameter set.” Wood only discloses that the subscriber sends a list of its air interfaces and the base station forwards the subscriber’s list of air interfaces attaching its own air interfaces. There is no selection of a sub-set of air interfaces from a set of air interfaces. Both the subscriber and the base station send all of their air interfaces (e.g., col. 2, lines 58 to 68, a base station may reject a selection made by the controller if it is not available). In other words, in Wood, the controller simply selects an interface, which is supported by both the subscriber and the base station (col. 2, lines 37 to 39). If this selection is not accepted by the base station, the controller may select another interface supported by both the subscriber and the base station.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

In short, in Wood, there is only one entity *i.e.*, the controller, making a selection of an air interface. Wood fails to disclose or suggest one entity such as a controller selecting a sub-set of air interfaces and another entity such as a node of RAN selecting one air interface from the sub-set. In Wood, there is no node of RAN. Furthermore, in Wood, there is no providing of this selected sub-set of air interfaces to a node of RAN. Wood only discloses the controller providing one selected interface to the base station.

Hsu is being cited for its disclosure of selecting resources based on the subscriber's quality of service information and as such clearly fails to cure the deficient disclosure of Wood. Specifically, Hsu discloses a method of selecting quality of service purchased by the subscriber (*see Abstract*). In Hsu, a home location register (HLR) 28 stores service subscription register 32 containing quality of service (SQC) purchased by the subscriber (Fig. 1; col. 6, lines 12 to 24). When a communication is set-up with the subscriber, the service subscription register is accessed at the mobile switching center (MSC) level, and the SQC of the subscriber is sent to the base station controller (BSC), which selects resources based on the SQC purchased by the subscriber (Fig. 1; col. 6, lines 25 to 39).

Hsu, however, just like Wood, fails to disclose or suggest a node of a RAN. That is, in Hsu, the controller *i.e.*, the BSC, receives the SQC and based on this SQC reserves the required resources. In other words, even if, Wood is somehow combined with Hsu, the combined disclosure of these references fails to disclose or suggest a controller selecting a sub-set of air interfaces from a set of air-interfaces and then, having a second entity *i.e.*, a node of RAN, select an air interface from the provided sub-set of air interfaces.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

Therefore, “selecting a sub-set of air interfaces from a set of air interfaces, the sub-set containing air interfaces, which support the required quality of service parameter set, providing the sub-set to a node of a radio access network having the set of air interfaces, selecting an air interface from the sub-set by the node for providing the required quality of service to a user equipment,” as set forth in claim 1 is not disclosed or suggested by Wood in view of Hsu, which lack having a controller select a sub-set of air interfaces from a set and providing this sub-set to a node of a radio access network and having the node select an air interface from the sub-set of air interfaces. Together, the combined disclosure of these references would not have and could not have led an artisan of ordinary skill in the art to have achieve the unique features of claim 1. For at least these exemplary reasons, claim 1 is patentable over the combined disclosure of Wood and Hsu. Accordingly, Applicant respectfully requests the Examiner to withdraw this rejection of claim 1 and its dependent claims 2-4.

Next, independent claims 7-9 recite features similar to, although not necessarily coextensive with, the features argued above with respect to claim 1. Therefore, arguments presented with respect to claim 1 are respectfully submitted to apply with equal force here. For at least substantially analogous exemplary reasons, therefore, independent claims 7-9 are patentable over Wood in view of Hsu. Claim 10 is patentable at least by virtue of its dependency on claim 1.

Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wood in view of Hsu, and further in view of U.S. Publication No. 2002/0147008 to Kallio² (hereinafter

² Cited by Applicant in Information Disclosure Statement filed February 12, 2004, and listed on the Examiner’s Form PTO-892.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

“Kallio”). Applicant respectfully traverses these grounds of rejection in view of the following comments. Claims 5 and 6 depend on claim 1. Applicant has already demonstrated that the combined disclosure of Wood and Hsu do not disclose or suggest the unique features of claim 1. Kallio is being cited only for its alleged disclosure of seamless handovers between various networks such as GSM and WLAN (*see* pages 6 and 7 of the Office Action). Accordingly, Kallio fails to cure the deficient disclosure of Wood and Hsu, and as such, claim 1 is clearly patentable over the combined disclosure of Wood, Hsu, and Kallio. Claims 6 and 7 are patentable at least by virtue of their dependency on claim 1.

In addition, with respect to the dependent claim 6, the Examiner alleges that since Kallio discloses WLAN and the GSM network, it would be obvious to include UMTS interface with HSDPA format, and WLAN interface with WLAN format allegedly to enhance flexibility (*see* page 7 of the Office Action). Applicant respectfully disagrees.

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. *See In re Kotzab*, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (*citing In re Dembicza*k, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999)). Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one “to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.” *Kotzab*, 55 USPQ2d at 1316 (*quoting W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983)). “Although the suggestion to combine references may flow from the nature of the problem,

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

‘defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness.’’’ *Exolochem, Inc. v. Southern California Edison Co.*, 2000 U.S. App. LEXIS 22681, *28 (Fed. Cir. 2000) (*citing Monarch Knitting Mach. Corp. v. Sulzer Morat Gmbh*, 139 F.3d 877, 880, 45 USPQ2d 1977, 1981 (Fed. Cir. 1998)). Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be “clear and particular.” *Winner International Royalty Corporation v. Ching-Rong Wang*, 53 USPQ2d 1580, 1586-87 (Fed. Cir. 2000) (citations omitted).

In the present case, Kallio only discloses a seamless switch between the GSM and WLAN networks and the presence of several interfaces (none of them being UMTS or WLAN). Specifically, Kallio discloses a radio interface Um between the mobile station and the base station, an A-bis interface between the base station and the BSC, and an A interface between the BSC and the MSC (¶ 27). Kallio does not disclose or suggest any formats for the interfaces. Accordingly, Applicant respectfully submits that the prior art of record does not disclose or suggest selecting UMTS air interface with the format of HSDPA, and the alternative interface being WLAN with WLAN format. That is, the prior art references that do not even mention various formats for the interfaces could not have suggested a particular format for a particular interface. Applicant respectfully submits that but for the claimed invention, one of ordinary skill in the art, based on the disclosure of Wood, Hsu, and Kallio, would not have and could not have achieved the unique features of claim 1. For at least these additional exemplary reasons, claim 6 is patentable over Wood, Hsu, and Kallio.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 10/699,687
Attorney Docket No.: Q78089

V. New Claims

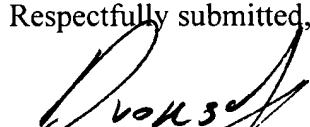
In order to provide more varied protection, Applicant adds claims 11-15. Claims 11-15 are patentable at least by virtue of their dependency on claim 1.

VI. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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